

UltraProteus



The UltraProteus MIDI sound module combines the great sound quality you'd expect from the renowned E-mu® Proteus® family, with a host of powerful new features—state-of-the-art Z-Plane™ filter technology, onboard effects and a front panel ROM/RAM card slot. UltraProteus encompasses a superb 16MB complement of sounds based on the resident sound sets in Proteus/1 Pop Rock, Proteus/2 Orchestral and Proteus/3 World. UltraProteus also includes the incredible Proformance® stereo grand piano and a variety of other new waveforms.

UltraProteus features 384 onboard presets or 640 with a ROM or RAM card. The presets range from accurate emulations of traditional musical instruments to extraordinary new sounds created by combining diverse and unrelated instruments. Create your own entirely new sounds with UltraProteus using its

470 samples and waveforms as source material.

Or if you prefer, use the ROM/RAM preset card slot on the front panel for the easy addition of new UltraProteus presets from E-mu and third-party developers.

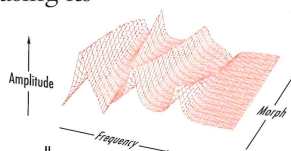


UltraProteus features state-of-the-art Z-Plane filter technology. E-mu's proprietary Z-Plane technology delivers unmatched creative control for expressive and realistic acoustic sounds, as well as sounds you've never even imagined!

To maximize your creativity and minimize limitations, UltraProteus has all the great features that make Proteus famous: 32-voice polyphony for accessing a universe of sounds simultaneously; 16-MIDI channel multi-timbral operation for demanding sequencing projects; six assignable polyphonic outputs for creative mixing; and E-mu's proprietary MIDIPatch™ modulation system for creating new sounds easily. UltraProteus also features 27 programmable digital effects such as reverb, chorus and flanging to add depth to your sound.



Whether you're into rock, jazz, world beat, funk, industrial, symphonic or something beyond description, UltraProteus offers all the sounds you need to express yourself fully in composition and performance. UltraProteus—the ultimate in Proteus family sound modules.



Z-Plane Synthesis

While traditional synthesis technology offers a single 4-pole lowpass filter, Z-Plane Synthesis allows you to interpolate sounds through multi-dimensional 14-pole filters in real time.

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E-mu Systems, Inc.

Menus

Master Edit Menu

Master Tune, Transpose, User Key Tuning, Global Bend, Global Velocity Curve, MIDI Mode, MIDI ID#, MIDI Mode Change, Program Change Map, Controllor Assign, Footswitch Assign, Send MIDI Data, Auto-Select, Compare Mode, Viewing Angle

MIDI Map Edit Menu

Select MIDI Map, MIDI Map Name, Preset/HyperPreset Assign, Volume Assign, Pan Assign, Mix Output Assign, MIDI Messages Enable, Bank Select, Program Change Map Select, Effect A Select, Effect B Select, Effects Amount, Effects Output Select, Save MIDI Map

Preset Edit Menu

Preset Name, Primary Instrument, Secondary Instrument, Volume, Pan, Key Range, Transpose, Pitch Tune, Alternate Envelope On/Off, Primary Alt. Env. AHDSR, Secondary Alt. Env. AHDSR, Double+Detune, Sound Delay, Sound Start, Sound Reverse, Nontranspose, Loop Enable, Loop Offset, Solo Mode, Solo Priority, Portamento Rate, Portamento Shape, Portamento Mode, Crossfade: Mode, Direction, Balance, Amount; Cross-Switch Point, Filter Type Primary/Secondary, Filter Level, Morph Offset, Filter Frequency Track, Filter Transform 2, Filter Reverse, Auxiliary Envelope: Amount, Delay, AHDSR; LFO 1/2: Shape, Amount, Rate, Delay, Variation; Function Generator 1/2 Segment; Level, Time, Shape, Conditional Jump, Conditional Value, Destination Segment; Function Generator 1/2 Amount, Note-On Control 0-9 (9 Sources, 50 Destinations), Realtime Control 0-9 (13 Sources, 35 Destinations), Footswitch Control 1-3 (13 Destinations), Pitch Bend Range, Pressure Amount, Controllor ABCD Amounts, Velocity Curve, Keyboard Center, Keyboard Tuning, Mix Output Select, Save Preset

HyperPreset Edit Menu

HyperPreset Name, Zone: Select (1-16), Preset Select, Volume Assign, Pan Assign, Key Range, Velocity Range, Velocity Offset, Transpose, Pitch Tune, Portamento Mode, Free-Run Function Generator, Save HyperPreset

Copy Menu

Copy: Preset, Layer (Pri/Sec), Filter, LFO, Function Generator, Auxiliary Envelope, Note-On Control, Realtime Control, HyperPreset, HyperPreset Zone, Free Run Function Generator, MIDI Map, MIDI Map Channel, Effect, Program Change Map, Bank

Digital Effects

Two simultaneous effects may be programmed. Effects include: Reverbs (Room, Warm Room, Small Room 1-2, Hall 1-3, Chamber-2, Plate 1-2, Early Reflections 1-4, Reverse Early Reflections, Rain), Shimmer, Stereo Flange, Phaser, Stereo Chorus, Delay, Cross Delay, Echo, Fuzz, Fuzz Lite, Ring Modulator

Technical Specifications

Audio Channels: 32

Data Encoding: 16-bit linear, 18-bit output DACs

Sound Memory: 16MB

Preset Capacity: 640 (256 Presets and 128 HyperPresets internal; 128 Presets and 128 HyperPresets on card)

Filters: 32 14-Pole Interpolating Digital Filters

Programmed Filter Types: 288

Signal to Noise Ratio: >90dB

Dynamic Range: >90dB

Frequency Response: 20Hz-18kHz

Inputs

Stereo Effects Return In (2 pairs), MIDI In

Outputs

Six, polyphonic (configurable as 3 pairs of stereo outputs w/programmable panning), Mono Mix, Headphone Output, MIDI Out, MIDI Thru

Data Card

PCMCIA card stores 128 Presets, 128 HyperPresets and 16 MIDI Maps

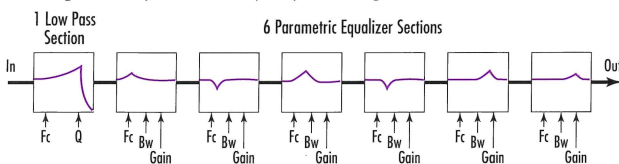
Z-Plane Synthesis

What Is Z-Plane Synthesis?

Z-Plane Synthesis is E-mu's proprietary technology for providing new levels of expressivity and dynamic timbral control of sample-based waveforms.

Conventional synthesizer filters consist of a single section that simply lets you attenuate a waveform's harmonic content above a single frequency with (in some cases) an optional resonant peak at that frequency. In contrast, a Z-Plane filter consists of seven sections, each (very much like a band of parametric EQ) allowing independent control of frequency, bandwidth and degree of peak or notch. As a result, Z-Plane filters can model virtually any resonant characteristic; whether that of an acoustic instrument body, the human vocal tract or even something that does not exist in nature.

This modeling capability alone makes Z-Plane filters the most powerful filters ever available on a commercial synthesizer. But their real power comes from their ability to smoothly interpolate (or "morph") between resonant models. Whether in response to velocity, pressure, or a variety of real-time controls, Z-Plane filters let you dynamically transform sounds in ways never before possible. From subtle expressive variation to alien mutation, Z-Plane Synthesis gives you access to sounds which previously existed only in your imagination.



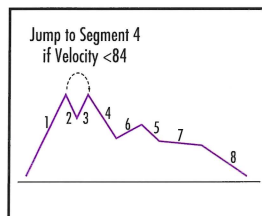
Z-Plane Filters

Z-Plane filters give independent control over 14 filter poles configured as seven 2-pole sections

The UltraProteus Function Generator

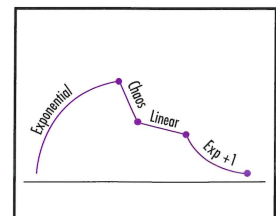
To give you maximum creative control of its Z-Plane filters, each UltraProteus voice includes (in addition to three traditional AHDSR envelope generators) two advanced programmable Function Generators. For each of a Function Generator's eight segments you can specify not only level and rate, but shape (select from 64 shapes including Linear, Exponential, Random and Chaos) and a Conditional Jump that will cause a jump to another specified segment based on the state of a chosen parameter (such as velocity, footswitch position, and note-off, etc.).

As part of UltraProteus' MIDIPatch modulation system, each Function Generator can be assigned to any of 35 real-time control destinations including filter morphing.



Conditional Jumps

Allows control of function generator based on the state of various parameters



Function Generators

- Shapes selectable per segment
- 64 shapes to choose from